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ABSTRACT

Successful classroom questioning is an art that can be cultivated through practice. While teachers do use questions in classroom interaction with students, these questions tend to be lower order questions which only require recall or comprehension on the part of the students. Research suggests that teachers favor these lower order questions for three reasons: (1) students need to know facts before progressing to speculation or higher levels of thought; (2) school curriculum, by its nature, is more fact-oriented than thought-oriented; and (3) teachers lack the skills needed to formulate higher order questions. The most practical and expedient recommendations for improving or developing teachers' higher level questioning skills are linked to commonly accepted communication skills. Five recommendations for teachers are: use wait time; ask open-ended questions; involve all students; encourage conversation among students; and encourage students to elaborate. (IAH)

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"QUESTIONS, NOT ANSWERS, STIMULATE CRITICAL THINKING"

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ABSTRACT

Successful classroom questioning is an art that can be cultivated through practice. The authors provide recommendations that teachers can use to develop higher order questioning skills.

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QUESTIONS, NOT ANSWERS,
STIMULATE CRITICAL THINKING

The relationship between questioning skills and teaching was recognized in American education as long ago as 1911, when Charles DeGarmo said: "In the skillful use of the question more than in anything else, lies the fine art of teaching; for in such use we have the guide to clear and vivid ideas, the quick spur to imagination, the stimulus to thought, the incentive to action."

If we reflect for a moment on DeGarmo's words, we can probably recall when a teacher's question did indeed motivate us intellectually.

The use of questions in teaching is a very common practice. According to Kerry (1982), a teacher probably asks about one thousand questions per week. What purposes do these questions serve?

1. To encourage students to participate
2. To determine what students know and don't know
3. To engage students in discussion
4. To attract students' attention
5. To provide students with an opportunity to shine in the eyes of their classmates
6. To assess students' level of understanding
7. To provide a review of content
8. To develop critical and creative thinking skills

The above purposes are noble and would satisfy DeGarmo's intent that questions be used skillfully. However, very few teacher questions actually are "skillful." According to Gall (1984), only about 20 percent of teachers' questions require students to think, while about 60 percent require factual recall, and 20 percent are procedural in nature. In actual classroom practice, then, most teacher questions are lower order, that is, requiring only recall or comprehension on the part of students (Kerry, 1980).

Research is available to explain why teachers use so many lower order questions. According to Gall (1970), the predominance of lower order questions is caused by:

1. The necessity for students to know facts before they progress to speculation or higher levels of thought.
2. The curriculum, by its nature, is fact-oriented rather than thought-oriented; and if teachers want their students to learn the curriculum, they will naturally focus on factual questions.
3. Teachers lack the necessary skills to formulate questions that require higher level thought.

The three reasons cited by Gall above do not vindicate teachers from using questions that require higher order thinking skills. It is definitely necessary for students to know facts before speculating, but speculation can also precede fact finding or knowledge. This type of pedagogy is commonly used when

students are asked to predict events or outcomes in stories.

Regarding Gall's second assertion, that the curriculum is fact-oriented, it should be remembered that a primary goal of education is to teach and encourage students to think critically and creatively. When teachers overemphasize factual information, they are avoiding an educational litmus test; that is, are they preparing students to apply factual knowledge to problem solving situations?

Gall's third explanation for teachers' overuse of factual or knowledge questions is that teachers lack the necessary skills to ask higher level questions. Actually, this is only partly true. Not all teachers lack the necessary skills. If some teachers possess the skills, why don't more teachers possess the skills? What is needed is an easy and practical model for teachers to follow to develop higher level questioning skills. The research provides a potpourri of recommendations, but the authors believe that teachers, who are already overburdened with other staff development activities, need recommendations that can be easily integrated into their existing repertoire of teaching skills.

It is the authors' opinion that the most practical and expedient recommendations for improving or developing higher level questioning skills are linked to commonly accepted communication skills:

1. Be sure to always use wait-time (Rowe, 1974). This means waiting three to five seconds after asking a question and after the student's response. This one is critical. It encourages everyone to think.
2. Ask open-ended questions. This encourages creative and critical thinking. According to Church (1990), this will encourage students to talk, take risks with their ideas, problem solve, and express themselves creatively. According to Ramsey, et al (1990), if students are to participate in the social structure, they need to think and act independently.
3. Involve all students. Research has demonstrated that many teachers have an interaction bias related to the normal arc of vision. This means that a teacher may exclude from consideration students outside their arc of vision. The bias varies from teacher to teacher. Some teachers are more conscious of what is happening on one side or section of the room (Kerry, 1982).
4. Encourage conversation among students. Students should be able to cooperatively discuss possible responses to higher order questions. This technique will bring to their attention the importance of obtaining and valuing the opinions of others.
5. Encourage students to elaborate. This encourages verbal expression and creative thinking. It also provides

an opportunity for deeper insights into their own ideas (Church, 1990).

Ramsey, et al (1990) concluded that successful classroom questioning is an art that can be cultivated through practice. Since questioning is a common human activity that will assume more importance in a technological society (Ramsey, et al, 1990), it seems important that teachers not only develop their own questioning skills, but also encourage their students to do likewise.

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